

CROP RESPONSE OF BRINJAL UNDER DRIP AND MICRO-SPRINKLER IRRIGATION SYSTEM

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ABSTRACT : Efficient crop production requires constant attention for efficient utilization of controllable growth inputs. An optimum irrigation scheduling is essential for obtaining the high yield of good quality brinjal. The field study was carried out at I.I.T., Kharagpur to study the effect of drip and micro-sprinkler irrigation systems on growth of brinjal crops based on different IW/CPE ratios and fertilizer levels. Four irrigation levels (0.4, 0.5, 0.6 and 0.7 IW/CPE ratios) and three fertilizer levels (75%, 100% and 125% of recommended dose) with three replications were taken. The observations on plant height, number of branches, leaf area index and average yield were recorded and analyzed to determine the relationship between IW/CPE ratio and fertilizer levels. The average maximum yield (39.79 t/ha) was recorded at 0.5 IW/CPE ratio at 75 % of recommended dose of fertilizer under drip irrigation system. The irrigation levels of 0.5 and 0.6 IW/CPE ratios were found to be most effective for drip and micro-sprinkler irrigation system, respectively to obtain maximum yield of brinjal.

Key Words: IW/CPE ratio, drip, micro-sprinkler.